

REMARKS

This communication is responsive to Office Action of November 18, 2004 in which the following objections were raised: [3] Claim 5 was objected to due to an informality; [4-5] Claims 1,3,5-10,12,14,16-19 and 22-23 were rejected under 35 U.S.C. 112 second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention; [6-7] Claims 1,3,5-7, 12, 14 and 16-18 were rejected under 35 U.S.C. 102(e) as being anticipated by Long (U.S. 6,240,141); [8] Claims 8-10, 19 and 22-23 were indicated to be allowable if rewritten to overcome the rejections under 35 U.S.C. 112 second paragraph and to include all of the limitations of the base claim and any intervening claims.

The Applicant appreciates the Examiner's detailed Office Action.

TELEPHONIC CONFERENCE WITH THE SUPERVISORY EXAMINER :

On or about the week of May 2nd 2005 the Applicant's Attorney initiated a telephonic conference with Supervisory Patent Examiner Chaki Kakali to discuss the absence in the Office Action of 11-18-04 of any explicit withdrawal of the various grounds for rejection not maintained therein with respect to the Final Office Action of 12/18/2003. Those include: the drawing objection under 37 CFR 1.83(a) as failing to show certain key features described in the specification (Final Office Action of 12/18/2003 page 2 para 3) ; the objection under 35 U.S.C. 112 first paragraph to Claims 1-10 and 12-19 as failing to comply with the enablement requirement (Final Office Action of 12/18/2003 page 2-3 para 4-5); as well as the objections under 35 U.S.C. 132 to the amendment itself as adding new matter to the original disclosure (Final Office Action of 12/18/2003 page 10 para 13). Examiner Kakali indicated that in her opinion it should be assumed that those grounds for rejection were withdrawn. She further indicated that an Examiner's interview summary, not yet received by the Applicant, would explicitly address the withdrawal of these grounds for rejection. The Applicant greatly appreciates the Supervisory Examiner's willingness to address these issues and looks forward to having such withdrawal made of record by the Examiner, and apologizes in advance if the Applicant's characterization of the conference does not conform with either the recollection or current intent of the Supervisory Examiner.

TELEPHONIC CONFERENCE WITH THE EXAMINER:

On or about May 16th 2005 the Applicant's Attorney initiated a telephonic conference with Examiner Chat C. Do to discuss the rejection in the Office Action of 11/18/2004 under 35 U.S.C 112 second paragraph as to a lack of clarity in Independent Claims 1 and 12 resulting from the limitation "*limited to solutions to a single unsolved one of the output node*". (Office Action of 11/18/2004 at page 2-3, para. 4-5). The Applicant's Attorney expressed consternation with the clarity rejection and attempted to verbally paraphrase the Claim for the Examiner's benefit in a manner consistent with both the Claim and the Specification. As both the Examiner and any Attorney are aware such efforts and the Examiner's request to make them of record are destined to overly limit the interpretation of the Claim should it be allowed despite the clear meaning of the Claim and voluminous support for the rejected language throughout the specification. Mindful of those cautions the Applicant specifically directs the Examiner's attention to the portions of the specification cited by the Applicant in directly addressing the 112 rejection.

The Applicant offered by way of example the case in which the row transform components include a Radix-4 butterfly with 4 inputs and 4 outputs; in which the row transform components generate partial row transforms limited to solutions to a single unsolved one of the "4" output nodes of the Radix-4 butterfly on each of the 4 iterations through ordered sets of samples from each input sample set; and the column transform components complete column transforms from the partial row transforms generated by the row transform components prior to a completion of the 4 iterations through each input sample set by the row transform components; thereby to reduce an interval required to transform each successive input sample set. The Applicant further discussed what was meant by unsolved ones of the outputs of the Radix-4 butterfly.

At the conclusion of the conference the Examiner indicated a willingness to withdraw the rejection under 35 U.S.C. section 112 second paragraph as to Claims 1 and 12 and the Applicant appreciates same.

3-CLAIM 5 OBJECTED TO DUE TO INFORMALITY:

The Examiner objected to Claim 5 due to an informality.

Applicant has amended the specification accordingly to overcome the objection.

4-5 CLAIMS 1,3,5-10,12,14,16-19, 22-23 REJECTED UNDER 35 U.S.C. 112 2nd:

Claims 1,3,5-10,12,14,16-19 and 22-23 were rejected under 35 U.S.C. 112 second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention,

Rejection of Claims 1,12, 3, 5-7, 14, 16-18:

Claims 1 and 12 were rejected under this subpart due to a lack of clarity arising from the above discussed language in Claims 1 and 12 resulting from the limitation "*limited to solutions to a single unsolved one of the output node*". (Office Action of 11/18/2004 at page 2-3, para. 4-5). The specification addresses such limitation in numerous drawings and associated text including the following: FIGS. 8, 9A-9B, 10, 12AB, 14A, 16 and the associated text. FIGS 9A-9B are discussed as follows:

" FIGS. 9AB are isometric representations of the two dimensional implementation of the Fourier transform for the DFT and IDFT respectively. For the DFT an ... input sample of real inputs is compressed into a ... complex sample set.... The set is mapped into input memory as an array of... columns and ... rows. Next a partial row transform is performed on each row of the array. This partial radix "R" transform is performed on those vectors 810 which contribute to a solution of the coefficients of the first column 822 and is not performed for those vectors 812 which do not. The selection of samples from the first and subsequent rows is governed by the magnitude of "R". R is chosen to sliced the range of sample sets that will be processed into manageable portions. Once R is selected the spacing 806-808 between samples within a row can be determined. The spacing is substantially equal to the number of columns... divided by R. Once the partial row transform is performed the first column 822 of the intermediate transform set 802 has been generated. It is stored in a row and column memory.

The time required to generate the first and subsequent columns is significantly less time than required by prior art approaches in which all complex coefficients of a row are calculated before column calculation. Next the column is subject to a complete transform on all vectors 814. This transform produces the first column of output coefficients 824. Processing is completed on all input rows, and repeated through all remaining complex solution sets corresponding with vectors 812.”(Specification at page 19, line 20 through page 20, line 5, emphasis added)

The Applicant respectfully requests that the Examiner withdraw the rejection as to Claims 1-12 and all remaining rejected claims dependent thereon.

Rejection of Claims 8,9, 19,22:

Claims 8, 9, 19 and 22 were rejected under this subpart due parameter indefiniteness.

Applicant has amended the rejected Claims to overcome the rejection.

Rejection of Claim 10:

Claims 10 was rejected under this subpart due to antecedent basis for the “interval” limitation.

Applicant has amended the Claim to overcome the rejection.

6-7 CLAIMS 1,3,5-7, 12, 14, 16-18 REJECTED UNDER 35 U.S.C. 102(e):

Claims 1,3,5-7, 12, 14 and 16-18 were rejected under 35 U.S.C. 102(e) as being anticipated by Long (U.S. 6,240,141). The Examiner has characterized the Long reference as having ” row transform components generating partial row transforms ...limited to solutions to a single unsolved one of the “R” output nodes of the Radix-R butterfly on each of the “R” iterations ...from each sample set...and column transform componentsconfigure...to generate complete column transforms...from the partial row transforms

...prior to a completion of the "R" iterations through each sample set..."(Office Action of 11/18/2004 at page 4).

Applicant respectfully rejects this characterization of the Long reference. The cited FIG. 6A shows only an order for row processing and nothing more. Applicant respectfully directs the Examiner's attention to process flow FIG 5. of the Long application in which it is clearly shown that the row processing step 50 is completed on all row solutions before column processing begins. The Applicant further directs the Examiner's attention to Applicants process flow FIG. 16 in which the iterations for row and column processing in each sample set are clearly shown it is clearly shown.

The Applicant's limitations with respect to partial row transforms and the generation of complete column transforms are not disclosed in the Long specification and therefore are not anticipated by same.

The Applicant therefore respectfully requests that the Examiner withdraw the rejection as to Independent Claims 1 and 12. The Applicant also requests that the Examiner withdraw the rejections as to remaining Claims dependent thereon for the reasons discussed above and for other reasons of independent significance.

8 CLAIMS 8-10, 19 AND 22 OBJECTED TO:

The Examiner has indicated Claims 8-10, 19 and 22-23 to be allowable if rewritten to overcome the rejections under 35 U.S.C. 112 second paragraph and to include all of the limitations of the base claim and any intervening claims.

Applicant appreciates the Examiner's indication of Allowability and trusts that the amendments and arguments advanced herein will result in their allowance in their current dependent form.

CONCLUSION

In view of the above remarks, and the amendments to the Claims, Applicant believes that all remaining Claims 1, 3, 5-10, 12, 14, 16-19, 22-23 have been placed in a condition for allowance, and requests that they be allowed. Early notice to this effect is solicited.

The Commissioner is authorized to charge any additional fees which may be required, including petition fees and extension of time fees, to Deposit Account No. 50-1338 (Docket No. **VELCP003**).

Respectfully submitted,

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